Inductive Sensortelemetry
1 Channel Sensor Signal Amplifiers and Receivers
Sensor Signal Amplifier Type 2a

1 Channel FM/PCM Transmitter
For strain gage, PT100, Thermocouple
Sensitivity: 0,02 mV/V to 20 mV/V
Bandwidth: 0 (10) Hz to 50 kHz
Strain gage bridge supply: 2,5 V (3,3 V*)
Strain gage bridge resistance: 350 (120, 1000) Ω
Transmission: inductive sensortelemetry FM, PCM
Integrated filter
Resolution: 14 Bits, 16 Bits*
Zero point drift: 0,02, (0,01, 0,003 option)
Remote shunt calibration
Remote gain, zero, auto zero with 16 Bit resolution (option)
additional temperature channel (option)
Environmetal temperature range: -25 to +85°C (125°C, 150°C)
Max load: 50 000 g (depending on fixing)
Type: SV_2a_<bandwidth>_<accuracy>_<temp>_<mod>_<rmc>

* PCM-Version

1 kHz
0,02
85
FM
10 kHz
0,01
125
PCM16 RMC
40 kHz
0,003
150
160
Sensor Signal Amplifier Type 2b (End of shaft, Cartridge, Turbine)

Weight: about 10g

1 Channel FM/PCM Transmitter

For strain gage, PT100, Thermocouple
Sensitivity: 0.02 mV/V to 20 mV/V
Bandwidth: 0 (10) Hz to 50 kHz
Strain gage bridge supply: 2.5 V (3.3 V*)
Strain gage bridge resistance: 350 (120, 1000) Ω
Transmission: inductive sensortelemetry FM, PCM
Integrated filter
Resolution: 14 Bits, 16 Bits*
Zero point drift: 0.02, (0.01, 0.003 option)
Remote shunt calibration
Remote gain, zero, auto zero with 16 Bit resolution (option)
additional temperature channel (option)
Environmental temperature range: -25 to +85°C (125°C, 150°C)
Max load: 50 000 g (depending on fixing)
Type: SV_2b_<bandwidth>_<accuracy>_<temp>_<mod>_<rmc>

* PCM-Version

<table>
<thead>
<tr>
<th>Frequency (kHz)</th>
<th>Sensitivity (mV/V)</th>
<th>Temperature (°C)</th>
<th>Modulation</th>
<th>RMC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.02</td>
<td></td>
<td>FM</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0.01</td>
<td>125</td>
<td>PCM16</td>
<td>RMC</td>
</tr>
<tr>
<td>40</td>
<td>0.003</td>
<td>150</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Gewicht: 15 g
Trägheitsmoment: 4,2E-7 kgm²
Sensor Signal Amplifier Type 2c (End of shaft, Cartridge, Turbine)

**Diagram:**
- End of shaft
- Stator antenna (Pick up)
- Sensor signal amplifier

**Specifications:**
- **For strain gage, PT100, Thermocouple**
- **Sensitivity:** 0.02 mV/V to 20 mV/V
- **Bandwidth:** 0 (10) Hz to 50 kHz
- **Strain gage bridge supply:** 2.5 V (3.3 V*)
- **Strain gage bridge resistance:** 350 (120, 1000) Ω
- **Transmission:** inductive sensortelemetry FM, PCM
- **Integrated filter**
- **Resolution:** 14 Bits, 16 Bits*
- **Zero point drift:** 0.02, (0.01, 0.003 option)
- **Remote shunt calibration**
- **Remote gain, zero, auto zero with 16 Bit resolution (option)**
- **Additional temperature channel (option)**
- **Environmental temperature range:** -25 to +85°C (125°C, 150°C)
- **Max load:** 50 000 g (depending on fixing)

**Type:** SV_2c_<bandwidth>_<accuracy>_<temp>_<mod>_<rmc>
Sensor Signal Amplifier Type 2d (Disk, End of shaft, Small space)

1 Channel FM/PCM Transmitter
For strain gage, PT100, Thermocouple
Sensitivity: 0,02 mV/V to 20 mV/V
Bandwidth: 0 (10) Hz to 50 kHz
Strain gage bridge supply: 6 V (3,3 V*)
Strain gage bridge resistance: 1000 Ω
Transmission: inductive sensortelemetry FM, PCM
Integrated filter
Resolution: 14 Bits, 16 Bits*
Zero point drift: 0,02, (0,01, 0,003* option)
Remote shunt calibration
Environmental temperature range: -25 to +85°C (125°C, 160°C)
Max load: 50 000 g (max. speed: 30 000 RPM)
Type: SV_2d_<bandwidth>_<accuracy>_ <temp> <mod> <rmc>

* PCM-Version
Wheel Transmitter with integrated Signal Amplifier Type 2e

For more information see section: Universal shaft transmitter
Universal Shaft Transmitter with Sensor Signal Amplifier Type 2 Lager
(non divisible, 1 channel, with/without RMC, without rpm sensor)

1 Channel FM/PCM Transmitter
Type: SV_2Lager_<Di>_<_Da>_<temperatur range>_<_PCM>_<_IP65>

<table>
<thead>
<tr>
<th>in mm</th>
<th>in mm</th>
<th>-10 to 85°C PCM</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>65</td>
<td>-25 to 125°C</td>
</tr>
<tr>
<td>46</td>
<td>69</td>
<td>-45 to 85°C</td>
</tr>
<tr>
<td>51</td>
<td>75</td>
<td>-45 to 125°C</td>
</tr>
<tr>
<td>56</td>
<td>79</td>
<td>-25 to 160°C</td>
</tr>
<tr>
<td>61</td>
<td>85</td>
<td></td>
</tr>
</tbody>
</table>

For more information see section: Universal shaft transmitter
Sensor Signal Amplifier Type 3a

Weight: about 10g

**1 Channel FM/PCM Transmitter**

For strain gage, PT100, Thermocouple

- Sensitivity: 0.02 mV/V to 20 mV/V
- Bandwidth: 0 (10) Hz to 50 kHz
- Strain gage bridge supply: 2.5 V (3.3 V*)
- Strain gage bridge resistance: 350 (120, 1000) Ω
- Transmission: inductive sensortelemetry FM, PCM
- Integrated filter
- Resolution: 14 Bits, 16 Bits*
- Zero point drift: 0.02, (0.01, 0.003 option)
- Remote shunt calibration
- Remote gain, zero, auto zero with 16 Bit resolution (option)
- Additional temperature channel (option)
- Environmental temperature range: -25 to +85°C (125°C, 150°C)
- Max load: 50 000 g (depending on fixing)

Type: SV_3a_<bandwidth>_<accuracy>_<temp>_<mod>_<rmc>

* PCM-Version

---

For strain gage, PT100, Thermocouple

- Sensitivity: 0.02 mV/V to 20 mV/V
- Bandwidth: 0 (10) Hz to 50 kHz
- Strain gage bridge supply: 2.5 V (3.3 V*)
- Strain gage bridge resistance: 350 (120, 1000) Ω
- Transmission: inductive sensortelemetry FM, PCM
- Integrated filter
- Resolution: 14 Bits, 16 Bits*
- Zero point drift: 0.02, (0.01, 0.003 option)
- Remote shunt calibration
- Remote gain, zero, auto zero with 16 Bit resolution (option)
- Additional temperature channel (option)
- Environmental temperature range: -25 to +85°C (125°C, 150°C)
- Max load: 50 000 g (depending on fixing)

Type: SV_3a_<bandwidth>_<accuracy>_<temp>_<mod>_<rmc>

* PCM-Version
Sensor Signal Amplifier Type 3B

For strain gage, PT100, Thermocouple
Sensitivity: 0.02 mV/V to 20 mV/V
Bandwidth: 0 (10) Hz to 50 kHz
Strain gage bridge supply: 2.5 V (3.3 V*)
Strain gage bridge resistance: 350 (120, 1000) Ω
Transmission: inductive sensortelemetry FM, PCM
Integrated filter
Resolution: 14 Bits, 16 Bits*
Zero point drift: 0.02, (0.01, 0.003 option)
Remote shunt calibration
Remote gain, zero, auto zero with 16 Bit resolution (option)
additional temperature channel (option)
Environmental temperature range: -25 to +85°C (125°C, 150°C)
Max load: 50 000 g (depending on fixing)
Type: SV_3b_<bandwidth>_<accuracy>_<temp>_<mod>_<rmc>

* PCM-Version
Sensor Signal Amplifier Type 3C

Weight: about 12g

1 Channel FM/PCM Transmitter
For strain gage, PT100, Thermocouple
Sensitivity: 0,02 mV/V to 20 mV/V
Bandwidth: 0 (10) Hz to 50 kHz
Strain gage bridge supply: 2,5 V (3,3 V*)
Strain gage bridge resistance: 350 (120, 1000) Ω
Transmission: inductive sensortelemetry FM, PCM
Integrated filter
Resolution: 14 Bits, 16 Bits*
Zero point drift: 0,02, (0,01, 0,003 option)
Remote shunt calibration
Remote gain, zero, auto zero with 16 Bit resolution (option)
additional temperature channel (option)
Environmental temperature range: -25 to +85°C (125°C, 150°C)
Max load: 50 000 g (depending on fixing)
Type: SV_3c_<bandwidth>_<accuracy>_<temp>_<mod>_<rmc>

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>Sensitivity (mV/V)</th>
<th>Temperature (°C)</th>
<th>Modulation</th>
<th>Remote Calibration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 kHz</td>
<td>0.02</td>
<td>85</td>
<td>FM</td>
<td></td>
</tr>
<tr>
<td>10 kHz</td>
<td>0.01</td>
<td>125</td>
<td>PCM16</td>
<td>RMC</td>
</tr>
<tr>
<td>40 kHz</td>
<td>0.003</td>
<td>150</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* PCM-Version
Sensor Signal Amplifier Type 4a

Weight: about 15g

1 Channel FM/PCM Transmitter

- For strain gage, PT100, Thermocouple
- Sensitivity: 0.02 mV/V to 20 mV/V
- Bandwidth: 0 (10) Hz to 50 kHz
- Strain gage bridge supply: 2.5 V (3.3 V*)
- Strain gage bridge resistance: 350 (120, 1000) Ω
- Transmission: inductive sensortelemetry FM, PCM
- Integrated filter
- Resolution: 14 Bits, 16 Bits*
- Zero point drift: 0.02, (0.01, 0.003 option)
- Remote shunt calibration
- Remote gain, zero, auto zero with 16 Bit resolution (option)
- Additional temperature channel (option)
- Environmental temperature range: -25 to +85°C (125°C, 150°C)
- Max load: 50 000 g (depending on fixing)

Type: SV_4a_<bandwidth>_ <accuracy> _ <temp> _ <mod> _ <rmc>

- 1 kHz: 0.02 85 FM
- 10 kHz: 0.01 125 PCM16 RMC
- 40 kHz: 0.003 150

* PCM-Version
Sensor Signal Amplifier Type 4b

Weight: about 12g

1 Channel FM/PCM Transmitter
For strain gage, PT100, Thermocouple
Sensitivity: 0.02 mV/V to 20 mV/V
Bandwidth: 0 (10) Hz to 50 kHz
Strain gage bridge supply: 2.5 V (3.3 V*)
Strain gage bridge resistance: 350 (120, 1000) Ω
Transmission: inductive sensortelemetry FM, PCM
Integrated filter
Resolution: 14 Bits, 16 Bits*
Zero point drift: 0.02, (0.01, 0.003 option)
Remote shunt calibration
Remote gain, zero, auto zero with 16 Bit resolution (option)
additional temperature channel (option)
Environmental temperature range: -25 to +85°C (125°C, 150°C)
Max load: 50 000 g (depending on fixing)
Type: SV_4b_<bandwidth>_<accuracy>_<temp>_<mod>_<rmc>*

* PCM-Version
Sensor Signal Amplifier Type 5a
(Standard)

Weight: about 8g

1 Channel FM/PCM Transmitter
For strain gage, PT100, Thermocouple
Sensitivity: 0.02 mV/V to 20 mV/V
Bandwidth: 0 (10) Hz to 50 kHz
Strain gage bridge supply: 2.5 V (3.3 V*)
Strain gage bridge resistance: 350 (120, 1000) Ω
Transmission: inductive sensortelemetry FM, PCM
Integrated filter
Resolution: 14 Bits, 16 Bits*
Zero point drift: 0.02, (0.01, 0.003 option)
Remote shunt calibration
Remote gain, zero, auto zero with 16 Bit resolution (option)
additional temperature channel (option)
Environmental temperature range: -25 to +85°C (125°C, 150°C)
Max load: 50 000 g (depending on fixing)
Type: SV_5a_<bandwidth>_<accuracy>_<temp>_<mod>_<rmc>

* PCM-Version

For strain gage, PT100, Thermocouple
Sensitivity: 0.02 mV/V to 20 mV/V
Bandwidth: 0 (10) Hz to 50 kHz
Strain gage bridge supply: 2.5 V (3.3 V*)
Strain gage bridge resistance: 350 (120, 1000) Ω
Transmission: inductive sensortelemetry FM, PCM
Integrated filter
Resolution: 14 Bits, 16 Bits*
Zero point drift: 0.02, (0.01, 0.003 option)
Remote shunt calibration
Remote gain, zero, auto zero with 16 Bit resolution (option)
additional temperature channel (option)
Environmental temperature range: -25 to +85°C (125°C, 150°C)
Max load: 50 000 g (depending on fixing)
Type: SV_5a_<bandwidth>_<accuracy>_<temp>_<mod>_<rmc>

* PCM-Version
1 Channel FM/PCM Transmitter

For strain gage, PT100, Thermocouple
Sensitivity: 0.02 mV/V to 20 mV/V
Bandwidth: 0 (10) Hz to 50 kHz
Strain gage bridge supply: 2.5 V (3.3 V*)
Strain gage bridge resistance: 1000 Ω
Transmission: inductive sensortelemetry FM, PCM
Integrated filter
Resolution: 14 Bits, 16 Bits*
Zero point drift: 0.02, (0.01, 0.003* option)
Remote shunt calibration
Environmental temperature range: -25 to +85°C (125°C, 150°C)
Max load: 50 000 g (depending on fixing)
Type: SV_7a_<bandwidth>_<accuracy>_<temp>_<mod>

* PCM-Version

Sensor Signal Amplifier Type 7a (Miniature Flatchip)

Weight:
Epoxy: about 3g

- **+U_B**
- **R_Cal**
- **I-**
- **I+**
- **GND**
- **HF**

R_{v1} R_{v2}

2 golden enamelled wires twisted

2 golden enamelled wires twisted
**Sensor Signal Amplifier Type 7b (Miniature Patrone)**

**1 Channel FM/PCM Transmitter**

- **Sensitivity:** 0.02 mV/V to 20 mV/V
- **Strain gage bridge supply:** 6 V
- **Strain gage bridge resistance:** 1000
- **Transmission:** inductive sensortelemetry FM, PCM
- **Integrated filter**
  - Resolution: 14 Bits, 16 Bits* (option)
  - Zero point drift: 0.02, 0.01, 0.003* (option)
- **Remote shunt calibration**
- **Environmental temperature range:** -25 to +85°C (125°C, 160°C)
- **Max load:** 150 000 g (depending on fixing)
- **Type:** SV_7b_<bandwidth>_<accuracy>_<temp>_<mod>
  - *PCM-Version*

**Sensor Signal Amplifier Type 7b (Miniature Patrone)**

**Diagram:**
- End of shaft
- Stator antenna (Pick up)
- Integrated rotor coil
- Schematic diagram of the sensor signal amplifier

**Technical Details:**
- **Gewicht:** 5 g
- **Trägheitsmoment:** 1.5E-8 kgm²

**Color Coding:**
- **+Ub:** red
- **Rcal:** green
- **I-:** black
- **I+:** white
- **GND:** blue
- **HF:** 2 golden enamelled wires twisted

**Schematic Diagram:**
- **Rv1:** green
- **Rv2:** green

**Legend:**
- **Ug:** blue
- **I+:** red
- **I-:** red
- **Rcal:** green
- **GND:** green
- **HF:** green
- **2 golden enamelled wires twisted**

**Notes:**
- *PCM-Version*
Sensor Signal Amplifier Type 7c (Miniature Cartridge, Turbine)

1 Channel FM/PCM Transmitter

For strain gage, PT100, Thermocouple
Sensitivity: 0.02 mV/V to 20 mV/V
Bandwidth: 0 (10) Hz to 50 kHz
Strain gage bridge supply: 6 V (3.3 V*)
Strain gage bridge resistance: 1000 Ω
Transmission: inductive sensor telemetry FM, PCM
Integrated filter
Resolution: 14 Bits, 16 Bits* Zero point drift: 0,02, (0,01, 0,003* option)
Remote shunt... -25 to +85°C (125°C, 160°C)
Max load: 150 000 g (depending on fixing)
Type: SV_7c_<bandwidth>_<accuracy>_<temp>_<mod>

For strain gage, PT100, Thermocouple
Sensitivity: 0.02 mV/V to 20 mV/V
Bandwidth: 0 (10) Hz to 50 kHz
Strain gage bridge supply: 6 V (3.3 V*)
Strain gage bridge resistance: 1000 Ω
Transmission: inductive sensor telemetry FM, PCM
Integrated filter
Resolution: 14 Bits, 16 Bits* Zero point drift: 0,02, (0,01, 0,003* option)
Remote shunt... -25 to +85°C (125°C, 160°C)
Max load: 150 000 g (depending on fixing)
Type: SV_7c_<bandwidth>_<accuracy>_<temp>_<mod>

* PCM-Version

2 golden enamelled wires twisted
Sensor Signal Amplifier Type 7e (Superminiature Patrone)

1 Channel PCM Transmitter
For strain gage, PT100, Thermocouple
Sensitivity: 0.02 mV/V to 20 mV/V
Bandwidth: 0 (10) Hz to 50 kHz
Strain gage bridge supply: 6 V (3.3 V)
Strain gage bridge resistance: 1000 Ω
Transmission: inductive sensortelemetry FM, PCM
Integrated filter
Resolution: 16 Bits
Zero point drift: 0.02, (0.01, 0.003* option)
Remote shunt calibration
Environmental temperature range: -25 to +85°C (125°C, 160°C)
Max load: 150 000 g (depending on fixing)
Type: SV_7e_<bandwidth>_<accuracy>_<temp>_<mod>

1 kHz 0.02 85 FM
10 kHz 0.01 125 PCM16
40 kHz 0.003 160

End of shaft
Stator antenna
(Pick up)

Sensor signal amplifier

integrated rotor coil

+U_B
R_CAL
I-
I+
GND
HF

red
green
black
white
blue

2 golden enamelled wires twisted

PCM-Version

Green wire: 1 kHz, 10 kHz, 40 kHz
Green wire: 1 kHz, 10 kHz, 40 kHz
U_B
Rv1
Rv2
1 Channel FM/PCM Transmitter
For strain gage, PT100, Thermocouple
Sensitivity: 0.02 mV/V to 20 mV/V
Bandwidth: 0 (10) Hz to 50 kHz
Strain gage bridge supply: 6 V (3.3 V*)
Strain gage bridge resistance: 1000 Ω
Transmission: inductive sensortelemetry FM, PCM
Integrated filter
Resolution: 14 Bits, 16 Bits* 
Zero point drift: 0.02, (0.01, 0.003* option)
Remote shunt calibration
Remote gain, zero, auto zero with 16 Bit resolution (option)
additional temperature channel (option)
Environmental temperature range: -25 to +85°C (125°C, 150°C)
Max load: 50 000 g (depending on fixing)
Type: SV_8_<bandwidth>_<accuracy>_<temp>_<mod>_<rmc>

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Sensitivity</th>
<th>Temperature</th>
<th>Modulation</th>
<th>RMC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 kHz</td>
<td>0.02</td>
<td>85</td>
<td>FM</td>
<td></td>
</tr>
<tr>
<td>10 kHz</td>
<td>0.01</td>
<td>125</td>
<td>PCM16</td>
<td>RMC</td>
</tr>
<tr>
<td>40 kHz</td>
<td>0.003</td>
<td>150</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sensor Signal Amplifier Type 9

1 Channel FM/PCM Transmitter

For strain gage, PT100, Thermocouple
Sensitivity: 0.02 mV/V to 20 mV/V
Bandwidth: 0 (10) Hz to 50 kHz
Strain gage bridge supply: 6 V (3.3 V*)
Strain gage bridge resistance: 1000 Ω
Transmission: inductive sensortelemetry FM, PCM
Integrated filter
Resolution: 14 Bits, 16 Bits*
Zero point drift: 0.02, (0.01, 0.003* option)
Remote shunt calibration
Environmental temperature range: -25 to +85°C (125°C, 150°C)
Max load: 50 000 g (depending on fixing)
Type: SV_9_<bandwidth>_<accuracy>_<temp>_<mod>_<rmc>

* PCM-Version

Inner diameter: 17 to 50 mm
Outer diameter = Inner diameter + 20 mm

Through hole
Ø = 7 mm for weight reduction

1 kHz  0.02  85  FM
10 kHz  0.01  125  PCM16  RMC
40 kHz  0.003  150
Sensor Signal Amplifier Type SV-Flex

For strain gage, PT100, Thermocouple
Sensitivity: 0.02 mV/V to 20 mV/V
Bandwidth: 0 (10) Hz to 10 kHz
Strain gage bridge supply: 6 V (3.3 V*)
Strain gage bridge resistance: 350 Ω
Transmission: inductive sensortelemetry PCM
Integrated filter, Integrated temperatur sensor
Resolution: 16 Bits
Zero point drift: 0.02, (0.01, 0.003 option)
Remote shunt calibration
Remote gain, zero, auto zero with 16 Bit resolution (option)
additional temperature channel (option)
Environmental temperature r.: -25 to +85°C (125, 150, 160°C)
Max load: 50 000 g (depending on fixing)
Type: SV_Flex_<bandwidth>_<accuracy>_temp_<mod>_<rmc>

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Sensitivity</th>
<th>Max Load Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 kHz</td>
<td>0.02</td>
<td>PCM16 -</td>
</tr>
<tr>
<td>10 kHz</td>
<td>0.01</td>
<td>125 RMC</td>
</tr>
<tr>
<td></td>
<td>0.003</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>0.01</td>
<td>160</td>
</tr>
</tbody>
</table>
### Evaluation Unit (84TE)

#### Front side

**1 Channel FM/PCM Receiver**

- **Bandwidth:** 0 to 1 kHz (10 kHz, 40 kHz)
- **Output:** 0 to ±10 V, (0 to 20 mA, frequency, binary, USB, CAN, TCP/IP)
- **RF power:** 1 W, 3 W, 5 W
- **Transmission:** inductive sensortelemetry FM, PCM
- **Integrated filter**
- **Resolution:** 14 Bits, 16 Bits
- **Remote shunt calibration**
- **Environmental temperature range:** -25 to +70°C
- **Supply:** 9 to 36 V DC (board supply), 90...270 V AC 50/60 Hz

**Type:** AW_P_<bandwidth>_<supply>_<output>_<RF-power>_<temp>_<mod>_<Freq>

<table>
<thead>
<tr>
<th>Bandwidth</th>
<th>Supply</th>
<th>Output</th>
<th>RF Power</th>
<th>Temp</th>
<th>Mod</th>
<th>Freq</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 kHz</td>
<td>24B</td>
<td>U</td>
<td>1 W</td>
<td>70</td>
<td>F</td>
<td>-</td>
</tr>
<tr>
<td>2 kHz</td>
<td>90/270</td>
<td>I</td>
<td>3 W</td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>5 kHz</td>
<td>FC</td>
<td>F</td>
<td>5 W</td>
<td></td>
<td></td>
<td>Funk</td>
</tr>
<tr>
<td>10 kHz</td>
<td>B</td>
<td>10 W</td>
<td></td>
<td></td>
<td></td>
<td>3,2</td>
</tr>
<tr>
<td>40 kHz</td>
<td>USB</td>
<td>CAN</td>
<td></td>
<td></td>
<td></td>
<td>TCP/IP</td>
</tr>
</tbody>
</table>

**Remote shunt calibration**

- 1 kHz
- 2 kHz
- 5 kHz
- 10 kHz
- 40 kHz

**Integration:**

- Sensortelemetry
- FM/PCM
- Filter resolution: 14 Bits, 16 Bits
Evaluation Unit (42TE)

Front side

1 Channel FM/PCM Receiver

- Bandwidth: 0 to 1 kHz (10 kHz, 40 kHz)
- Output: 0 to ±10 V, (0 to 20 mA, frequency, binary, USB, CAN, TCP/IP)
- RF power: 1 W, 3 W, 5 W
- Transmission: inductive sensortelemetry FM, PCM
- Integrated filter
- Resolution: 14 Bits, 16 Bits*
- Remote shunt calibration
- Environmental temperature range: -25 to +70°C
- Supply: 9 to 36 V DC (board supply), 90...270 V AC 50/60 Hz
- Type: AW_P_ <bandwidth>_<supply>_ <output>_<RF-power>_ <temp>_<mod>_<Freq>

<table>
<thead>
<tr>
<th>Bandwidth</th>
<th>Supply</th>
<th>Output</th>
<th>RF Power</th>
<th>Temp</th>
<th>MOD</th>
<th>Freq</th>
<th>Mod</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 kHz</td>
<td>24B U</td>
<td>1W 70 F</td>
<td>1 W</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 kHz</td>
<td>90/270</td>
<td>I 3W</td>
<td>3 W</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 kHz</td>
<td>F 5W</td>
<td>PCM16 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 kHz</td>
<td>B 10 W</td>
<td>PCM12 3,2</td>
<td>5 W</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 kHz</td>
<td>USB CAN TCP/IP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Evaluation Unit (22TE)

Front side

with CAN-Bus or TCP/IP Option available

1 Channel FM/PCM Receiver

- Bandwidth: 0 to 1 kHz (10 kHz)
- Output: 0 to ±10 V, (0 (4) to 20 mA, frequency, binary, USB, CAN, TCP/IP)
- RF power: 1 W, 3 W, 5 W
- Transmission: inductive sensortelemetry FM, PCM
- Integrated filter
- Resolution: 14 Bits, 16 Bits*
- Remote shunt calibration
- Environmental temperature range: -25 to +70°C
- Supply: 9 to 36 V DC (board supply), 90...270 V AC 50/60 Hz
- Type: AW_P_<bandwidth>_<supply>_<output>_<RF-power>_<temp>_<mod>_<Freq>

<table>
<thead>
<tr>
<th>Frequency (kHz)</th>
<th>PSU</th>
<th>RF Power</th>
<th>Temp</th>
<th>Mod</th>
<th>freq</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 kHz</td>
<td>24B</td>
<td>U</td>
<td>1W</td>
<td>70 F</td>
<td>-</td>
</tr>
<tr>
<td>2 kHz</td>
<td>90/270AC</td>
<td>I</td>
<td>3W</td>
<td>PCM16</td>
<td>6</td>
</tr>
<tr>
<td>5 kHz</td>
<td>F</td>
<td>5W</td>
<td></td>
<td>PCM12</td>
<td>Funk</td>
</tr>
<tr>
<td>10 kHz</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td>3,2</td>
</tr>
<tr>
<td>40 kHz</td>
<td>USB</td>
<td>CAN</td>
<td></td>
<td></td>
<td>TCP/IP</td>
</tr>
</tbody>
</table>
Evaluation Unit (AW_D)

Pin Assignment of the D-Sub connector

- Pin 1: Output -10V to +10V
- Pin 2: GND Output
- Pin 3: Remote Calibration Signal (active low)
- Pin 4: do not connect
- Pin 5: GND Power Supply
- Pin 6: do not connect
- Pin 7: Power Supply 24 VDC ±10%
- Pin 8: do not connect
- Pin 9: do not connect

1 Channel FM/PCM Receiver

- Bandwidth: 0 to 1 kHz (10 kHz)
- Output: 0 to ±10 V, (0 to 20 mA, frequency, binary, USB)
- RF power: 1 W
- Transmission: inductive sensortelemetry FM, PCM
- Integrated filter
- Resolution: 14 Bits, 16 Bits
- Remote shunt calibration
- Enviromental temperature range: -10°C to +70°C (-45°C to +85°C)
- Supply: 24 ±15% V DC, 15 ±22% V DC, 9 to 36 V DC (board supply)
- Type: AW_D_<bandwidth>_U<output>_RF-power_<temp>_mod_<freq>_Mont

<table>
<thead>
<tr>
<th>Bandwidth</th>
<th>U/output</th>
<th>RF-power</th>
<th>Temp</th>
<th>Mod</th>
<th>Mod</th>
<th>Freq</th>
<th>Mont</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 kHz</td>
<td>15</td>
<td>1</td>
<td>70</td>
<td>F</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10 kHz</td>
<td>15</td>
<td>1</td>
<td>70</td>
<td>F</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10 kHz</td>
<td>24</td>
<td>1</td>
<td>45/85</td>
<td>PCM</td>
<td>16</td>
<td>Hu</td>
<td>3.2</td>
</tr>
<tr>
<td>1 kHz</td>
<td>24B</td>
<td>F</td>
<td>Kom</td>
<td>B</td>
<td>3</td>
<td>2</td>
<td>USB</td>
</tr>
<tr>
<td>10 kHz</td>
<td>24B</td>
<td>F</td>
<td>Kom</td>
<td>B</td>
<td>3</td>
<td>2</td>
<td>USB</td>
</tr>
</tbody>
</table>
Evaluation Unit (AW_M)

Pin Assignment of the D-Sub connector

- Pin 1: Output -10V to +10V
- Pin 2: GND Output
- Pin 3: Remote Calibration Signal (active low)
- Pin 4: do not connect
- Pin 5: GND Power Supply
- Pin 6: do not connect
- Pin 7: Power Supply 9 to 36 VDC
- Pin 8: do not connect
- Pin 9: do not connect

1 Channel FM/PCM Receiver

- Bandwidth: 0 to 1 kHz (10 kHz)
- Output: 0 to ±10 V, (0 (4) to 20 mA, frequency, binary, USB, CAN, TCP/IP)
- RF power: 1 W, 3 W, 5 W
- Transmission: inductive sensortelemetry FM, PCM, Radio
- Integrated filter
- Resolution: 14 Bits, 16 Bits*
- Remote shunt calibration
- Environmental temperature range: -10 to +70°C (-45 to +85°C)
- Supply: 24 (±5%) V DC, 15 (±2%) V DC, 9 to 36 V DC (board supply)
- Type: AW_P_<bandwidth>_<supply>_<output>_<RF-power>_<temp>_<mod>_<Freq>_<Mont>
Evaluation Unit (AW_P)

Pin Assignment of the D-Sub connector

- Pin 1: Output -10V to +10V
- Pin 2: GND Output
- Pin 3: Remote Shunt Cal (active low)
- Pin 4: do not connect
- Pin 5: GND Power Supply
- Pin 6: do not connect
- Pin 7: Power Supply 9 to 36 VDC
- Pin 8: do not connect
- Pin 9: do not connect

with CAN-Bus or TCP/IP Option available

1 Channel FM/PCM Receiver

- Bandwidth: 0 to 1 kHz (10 kHz)
- Output: 0 to ±10 V, (0 to 20 mA, frequency, binary, USB, CAN, TCP/IP)
- RF power: 1 W, 3 W, 5 W
- Transmission: inductive sensortelemetry FM, PCM, Radio
- Integrated filter
- Resolution: 14 Bits, 16 Bits*
- Remote shunt calibration
- Environmental temperature range: -10 to +70°C (-45 to +85°C)
- Supply: 24 (±5%) V DC, 15 (±2%) V DC, 9 to 36 V DC (board supply)

Type: AW_P_ <bandwidth>_<supply>_<output>_<RF-power>_<temp>_<mod>_<Freq>_<Mont>

| 1 kHz | 15 | U | 1W | 70 | F | - | - |
| 2 kHz | 24 | I | 3W | -45/85 | PCM16 | 6 | Hu |
| 5 kHz | 24B | F | 5W | PCM12 | Funk |
| 10 kHz | B | - | USB | CAN | TCP/IP |

Cover 'Zero' and 'Gain' screws after adjustment if necessary.
Evaluation Unit (AW_G)

Pin Assignment of the D-Sub connector
- Pin 1: Output -10V to +10V
- Pin 2: GND Output
- Pin 3: Shunt Cal. (active low)
- Pin 4: do not connect
- Pin 5: GND Power Supply
- Pin 6: do not connect
- Pin 7: Power Supply 9 to 36 VDC
- Pin 8: do not connect
- Pin 9: do not connect

with CAN-Bus or TCP/IP Option available

1 Channel FM/PCM Receiver
- Bandwidth: 0 to 1 kHz (10 kHz)
- Output: 0 to ±10 V, (0 (4) to 20 mA, frequency, binary, USB, CAN, TCP/IP)
- RF power: 1 W, 3 W, 5 W
- Transmission: inductive sensortelemetry FM, PCM, Radio
- Integrated filter
- Resolution: 14 Bits, 16 Bits*
- Remote shunt calibration
- Environmental temperature range: -10 to +70°C (-45 to +85°C)
- Supply: 24 (±5%) V DC, 15 (±2%) V DC, 9 to 36 V DC (board supply)

Type: AW_P_<bandwidth>_<supply>_<output>_<RF-power>_<temp>_<mod>_<Freq>_<Mont>

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Bandwidth</th>
<th>Supply</th>
<th>Output</th>
<th>RF Power</th>
<th>Temperature</th>
<th>Modulation</th>
<th>Frequency</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 kHz</td>
<td>15</td>
<td>U</td>
<td>1W</td>
<td>70</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2 kHz</td>
<td>24</td>
<td>I</td>
<td>3W</td>
<td>-45/85</td>
<td>PC16</td>
<td>6</td>
<td>Hu</td>
<td>-</td>
</tr>
<tr>
<td>5 kHz</td>
<td>24B</td>
<td>F</td>
<td>PC12</td>
<td>Funk</td>
<td>3,2</td>
<td>USB</td>
<td>CAN</td>
<td>TCP/IP</td>
</tr>
<tr>
<td>10 kHz</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cover 'Zero' and 'Gain' screws after adjustment if necessary
Adjustment of Zero Point and Gain

Evaluation Unit

Output voltage

10 V

0 V

Input voltage

0 V

10 V

Gain

Characteristic

Zero point

Evaluation Unit
Configuration
(direct signal data acquisition, Torque, no analog output)

- **Sensor signal amplifier**
- **Inductive supply and transmitting 13,56 MHz**
- **Speed Pickup**
- **Speed channel**
- **Data stream**
  - **Torque**
  - **Speed**
  - **Temperature**
- **CAN-Bus**
- **TCP/IP**
- **USB**
- **Supply 9 to 36 V DC**
- **0 to ±10 V**
- **Adjustment zero, gain, auto zero**

**Nullpunkt**
- -100
- -80
- -60
- -40
- -20
- 0
- 20
- 40
- 60
- 80
- 100

**Meßbereich**
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

**Übertragung**
- Initialisieren
- Transmit/Receive
- Status
- Werte erneut senden
- Zusatzfunktionen

**Adjustment zero, gain, auto zero**